

A PHORETIC METATEMNUS (PSEUDOSCORPIONIDA, ATEMNIDAE) FROM MALAYSIA.¹

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The pseudoscorpion genus *Metatemnus* is known from a rather small number of specimens from the western Pacific area. Three species are presently recognized, *M. philippinus* Beier, 1932 (cf. also Beier, 1965), from the Philippines and New Guinea, *M. heterodentatus* Beier, 1952, from Borneo, and *M. unistriatus* (Redikorzev, 1938) from South Vietnam (cf. Beier, 1951). In view of the paucity of information about the genus, it seems appropriate to report here on a specimen kindly sent to me by Mr. Robert D. Ward, who found it under an elytron of a cerambycid beetle he had received from Malaysia. This specimen, the type of the new species described below, is deposited in the collection of the American Museum of Natural History.

Metatemnus superior, NEW SPECIES

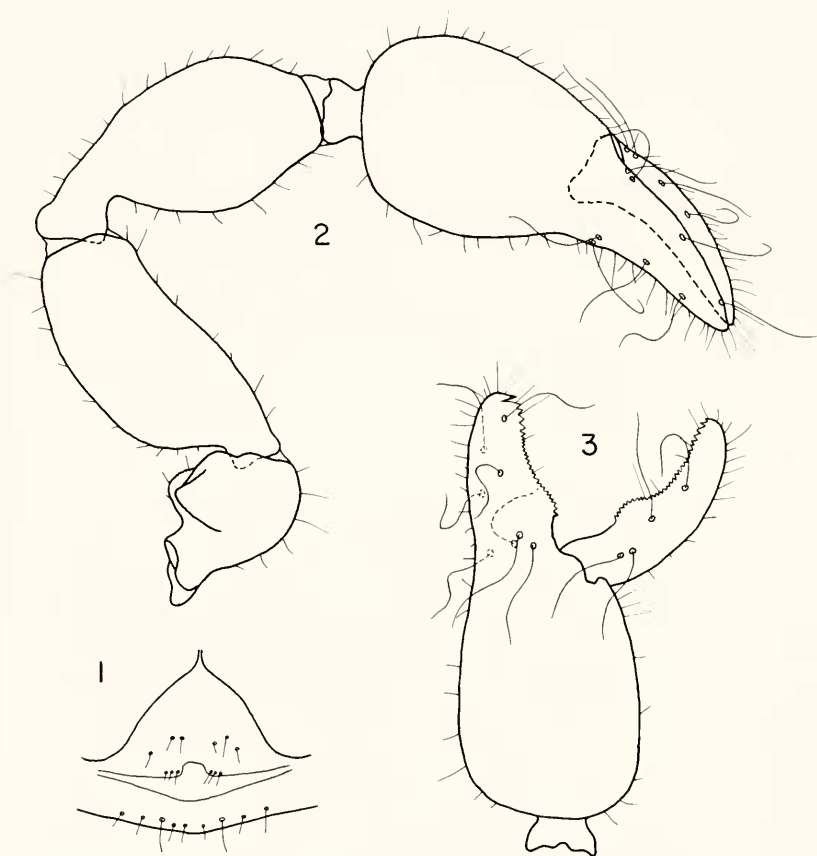
(Figs. 1 - 3)

MATERIAL.—Holotype male (WM1888.01001) found by R. D. Ward under elytron of a cerambycid beetle from Cameron Highlands, Pehang, Malaysia, 1967.

DESCRIPTION.—*Male*: Generally similar to *M. heterodentatus* Beier. Carapace and palps reddish brown, tergites and sternites light brown, other sclerotized parts yellowish brown. Most vestitural setae finely denticulate at tips, but the larger ones becoming acuminate. Carapace as broad as long, with one, distinct, transverse furrow 0.7 length from anterior margin; surface reticulated; two weak

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FIGS. 1-3 *Metatemnus superior*, new species, holotype male; Fig. 1, genital opercula; Fig. 2, dorsal view of left palp; Fig. 3, lateral view of right chela. (The trichobothria actually have the shapes shown on this specimen. Whether they are naturally so flexible is not known.)

eyespot present. Total setae on carapace about 70, with four at anterior and ten at posterior margin.

Abdomen broad ovate. Tergites 4-9 partially divided, others entire; surfaces reticulated; chaetotaxy 9:8:9:10:10:9:10:9:8:T2T4T2T:2T4T2:2. Sternites 4-9 partially divided, others entire; surfaces reticulated; chaetotaxy $\frac{6}{6}:(3)9(3):(1)9(1):15:16:14:14:11:T3T5T3T:T2T3T2T:2$. Anterior genital operculum as shown in fig. 1. Pleural membranes longitudinally, smoothly striate.

Chelicera typical; nearly twice as long as broad. Palm with four setae, all

acuminate except *es*, which is paucidenticulate at tip and shorter than others. Fixed finger with three tiny denticles just inside tip and five moderate-sized teeth along margin; movable finger with a distinct subapical lobe and one small denticle just proximad of this. Galea long and with 4-5 small, subterminal rami. Flagellum of four setae, all dentate. Serrula exterior with 29 blades.

Palps heavy, as in other species of the genus but with longer chelal fingers; proportions of segments shown in fig. 2. Surfaces smooth, except a small patch of granules on outer surface of chelal hand at base of fingers. Trichobothria of chela as shown in fig. 3. Chelal fingers much like those of *M. heterodentatus*, but longer and with more pronounced basal bulge of the dental ridge (these bulges overlap when the fingers are closed, that of the movable finger lying lateral to that of the fixed finger.) Fixed finger with 24 and movable finger with 31 teeth, of same shape and disposition as those of *M. heterodentatus* (Beier, 1952, Fig. 10) but with six and five large, sharp, distal ones respectively, rather than four on each finger. Venedens on fixed finger only, nodus ramosus of venom duct at level of seta *it*. Trochanter 1.45, femur 2.35, tibia 3.0 and chela 2.35 times as long as broad; hand 1.35 times as long as deep; movable finger 0.90 as long as hand.

Legs typical, rather slender. Leg IV with entire femur 3.6, tibia 4.4, and tarsus 5.15 times as long as deep; tactile seta on tarsus 0.10 length of segment from proximal end. Subterminal tarsal setae acuminate, strongly curved.

Female: Unknown.

Measurements (in mm.): Body length 4.05. Carapace length 1.18; posterior breadth 1.11. Chelicera 0.48 long by 0.25 broad; movable finger 0.40 long. Palpal trochanter 0.745 by 0.51; femur 1.24 by 0.53; tibia 1.25 by 0.62; chela (without pedicel) 1.83 by 0.78; hand (without pedicel) 1.035 by 0.755; movable finger 0.935 long. Leg. I: basifemur 0.51 by 0.27; telofemur 0.64 by 0.235; tibia 0.65 by 0.18; tarsus 0.59 by 0.11. Leg IV: entire femur 1.115 long; basifemur 0.385 by 0.265; telofemur 0.88 by 0.31; tibia 0.90 by 0.205; tarsus 0.67 by 0.13.

Discussion. The new species, *Metatemnus superior*, is similar in many respects to *M. heterodentatus* Beier from Borneo, but may be distinguished from the latter by its greater size, shorter chelal hand and longer movable chelal finger, and more slender legs. While some of these differences might be seen as constituting only sexual dimorphism (*M. heterodentatus* is known only from a single female), the considerably larger size of the present individual strongly suggests that this is a distinct species, because the males of atemnoid species are usually not much larger than the females. In the other species of *Metatemnus* (Beier, 1932 and 1952) the chelal hand is said to be as long as, or longer than, the palpal femur, but in *M. superior* the hand is much shorter than the femur (by about one-sixth). The movable finger of the chela is both absolutely and relatively longer than that of the other species of the genus; and the segments of the fourth leg

are likewise longer and more slender than those of others measured by Beier. In addition, while Beier has reported the palps of other species to be completely smooth, *M. superior* has a small area of granules on the outer surface of the chelal hand at the base of the fingers (admittedly, this is a rather obscure feature and may possibly be present in other species as well as *M. superior*).

The present specimen was found under an elytron of a cerambycid beetle. This constitutes the first record of phoresy (in the broad sense) by a member of this genus. Such behavior is, however, not particularly surprising, inasmuch as certain other atemnids have been reported as living beneath the elytra of beetles (cf. Beier, 1948). Though not so reported, all these forms probably live usually under the bark of trees, from whence they could easily transfer to the large tree-dwelling beetles, as in the oft-reported association between *Cordyloderes scorpioides* and *Aerocinus longimanus* in Central and South America (cf. Beck, 1968).

LITERATURE CITED

- BECK, L. 1968. Aus den Regenwäldern am Amazonas I. Natur und Museum. 98:24-32.
- BEIER, M. 1932. Pseudoscorpionidea. II. Subord. Cheliferinea. Tierreich. 58:1-258.
- . 1948. Phoresie und Phagophilie bei pseudoscorpionen. Öst. Zool. Zeitschr. 1:441-497.
- . 1951. Die Pseudoscorpione Indochinas. Mém. Mus. natn. Hist. Nat. Paris. Ser. A Zool. 1:47-231.
- . 1952. On some Pseudoscorpionidea from Malaya and Borneo. Bull. Raffles Mus. No. 24:96-108.
- . 1965. Die Pseudoscorpioniden Neu-Guineas und der benachbarten Inseln. Pacific Insects. 7:749-796.
- REDIKORTZEV, V. 1938. Les Pseudoscorpions de l'Indochine française recueillis par M. C. Dawydof: Mém. Mus. Natn. Hist. Nat. Paris. N.S. 10:69-116.

2.0131 A phoretic *Metatennus* (Pseudoscorpionida, Atemnidae) from Malaysia.

ABSTRACT.—*Metatennus superior*, new species, was found under an elytron of a cerambycid beetle.—William B. Muchmore, Department of Biology, University of Rochester, Rochester, New York, 14627.

Descriptors: Arachnida; Pseudoscorpionida; Atemnidae; *Metatennus superior*, new species, Malaysia; phoresy on cerambycid beetle.